UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/875,833	06/05/2001	Carl Taussig	10003477	7789

7590 02/09/2005

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Port Collins, CO 80527-2400

EXAMINER	
CHOI, WOO H	

ART UNIT	PAPER NUMBER
2186	

DATE MAILED: 02/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/875,833	TAUSSIG ET AL.	
	Examiner	Art Unit	
	Woo H. Choi	2186	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 January 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17 and 28-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17 and 28-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1 – 3, 5, 7, 8, 11 – 14, 17, and 28 – 30 are rejected under 35 U.S.C. 102(e) as being anticipated by Hashimoto *et al.* (US Patent No. 6,344,875, hereinafter "Hashimoto").

3. With respect to claims 1 – 3 and 7 Hashimoto discloses a data storage system for a portable data generating appliance (figure 8) comprising:

a temporary data storage circuit (13) coupled, in use, to receive data from the appliance (this limitation does not require that the data be received outside the appliance, as data received within the appliance is still data from the appliance), where the temporary data storage circuit has a storage capacity sufficient to store data comprising at least one picture from the appliance (figure 16, step 342);

a permanent data storage circuit (16) coupled, in use, to receive data from the temporary data storage circuit; and

a control circuit (14 and other control circuits that control I/O operations of the FIFO 13) coupled to the temporary data storage circuit and the permanent data storage circuit, the control circuit being adapted to effect transfer of data from the temporary data storage circuit to the permanent data storage circuit.

4. With respect to claim 11, the control circuit is operative to effect transfer of image data from the temporary data storage circuit to the permanent data storage circuit upon occurrence of a predetermined event (figure 16, steps 340 – 348, the entire transfer process is effected upon reception of a combined file, also the transfer to the memory card from the FIFO occurs upon separation of image and audio files).

5. With respect to claims 17, and 28, Hashimoto discloses a data storage device for a digital camera (figure 8), comprising:

a temporary data storage circuit coupled, in use, to receive image data from the camera (figure10, buffers 41 in memory card 16, alternatively FIFO 13);

a permanent data storage circuit (figure 10, flash memory 40) coupled, in use, to receive image data from the temporary data storage circuit (figure 16); and

a control circuit (the control circuit that controls the transfer of data between the buffers 41 and the flash 40 is not specifically shown but is inherent, alternatively Card I/F circuit 14) coupled to the temporary data storage circuit and the permanent data storage circuit, the control circuit being adapted to effect transfer of image data from the temporary data storage circuit to the permanent data storage circuit upon occurrence of a predetermined event (figure 16, steps

340 – 348, the entire transfer process is effected upon reception of a combined file, also the transfer to the memory card from the FIFO occurs upon separation of image and audio files).

5. With respect to claims 5 and 18, the permanent data storage circuit comprises a non-volatile memory module that is detachably coupled to the data storage system to allow a plurality of different memory modules to be used in a single data storage system (figure 8, the flash memory card 16 is detachably coupled).

6. With respect to claim 8 the temporary data storage to circuit comprises RAM (col. 8, lines 39 – 49, col. 9, lines 24 – 26).

7. With respect to claims 18, 19 and 20, the permanent data storage circuit comprises a non-volatile memory module that is replaceable in the interface card to allow a plurality of different memory modules to be used in a single data storage system (figure 10, flash modules are in the interface card, they are replaceable since the entire card is detachable, thus replaceable, they are also replaceable from within the interface card since the card is manufactured by assembling different components together into a single card and the flash module is one of the component that can be replaced with any other flash module of same kind while being assembled or repaired, a plurality of different modules are allowed to be used in a single card).

8. With respect to claims 12 and 29 the predetermined event (figure 16, steps 340 – 348, receiving and writing image file in memory card) comprises a predetermined time period elapsed

from the data being received in the temporary data storage circuit from the data generating appliance (receiving and writing an image file in memory card involves transfer of data from the camera to the flash memory 40 through the buffer 41 with inherent transmission delays which are predetermined and are the same every time).

9. With respect to claim 13 and 30, the predetermined event (figure 16, step 384) comprises further data being received by the temporary data storage circuit from the data generating appliance writing (writing image file involves reception of further data by the buffer until the entire file is received and written to the flash memory).

10. With respect to claim 14, the control circuit is effective to simultaneously control transfer of data from the temporary data storage circuit to the permanent data storage circuit and transfer said further data from the data generating appliance into the temporary data storage circuit (the Examiner notes that the claim does not require simultaneous transfer of data, it merely requires that the control circuit be effective to control the transfers simultaneously, i.e. simultaneous operation of circuits, the control circuits of figure 8 operate continuously once the power is turned on).

11. Claim 9 is rejected under 35 U.S.C. 102(e) as being anticipated by Easwar *et al.* (US Patent Application Publication No. 2001/0036231, hereinafter "Easwar")

Easwar discloses a data storage system (figures 1A and 1B, 150) for a portable data generating appliance (1A) comprising:

a temporary data storage circuit (figure 1A, 111) coupled, in use, to receive data from the appliance (this limitation does not require that the data be received outside the appliance, as data received within the appliance is still data from the appliance), where the temporary data storage circuit has a storage capacity sufficient to store data comprising at least one picture from the appliance, wherein the temporary circuit comprises Flash memory;

a permanent data storage circuit (166) coupled, in use, to receive data from the temporary data storage circuit (the Photo server 1B receives, processes, and stores pictures from the camera); and

a control circuit (151) coupled to the temporary data storage circuit and the permanent data storage circuit, the control circuit being adapted to effect transfer of data from the temporary data storage circuit to the permanent data storage circuit

wherein the portable data generating appliance is a digital camera (figure 1A),

12. Claims 9 and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Parulski *et al.* (US Patent Application No. 2001/0013894, hereinafter "Parulski").

Parulski discloses a data storage system for a portable data generating appliance (figure 4) comprising:

a temporary data storage circuit (flash memory card 330) coupled, in use, to receive data from the appliance, wherein the temporary data storage circuit comprises Flash memory;

a permanent data storage circuit (printer 30, a circuit used to store data permanently as printed image on print media) coupled, in use, to receive data from the temporary data storage circuit, wherein the permanent data storage circuit comprises non-volatile write-once memory (print media); and

a control circuit coupled to the temporary data storage circuit and the permanent data storage circuit, the control circuit being adapted to effect transfer of data from the temporary data storage circuit to the permanent data storage circuit (figure 6).

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

14. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto in view of Tringali.

Hashimoto discloses all of the limitations of the parent claim as discussed above. However, Hashimoto does not specifically disclose that the permanent data storage circuit comprises non-volatile write-once memory. On the other hand, Tringali discloses write-once memory (figure 7) in a data storage device.

It would have been obvious to one of ordinary skill in the art, having the teachings of Hashimoto and Tringali before him at the time the invention was made, to use the write-once memory in a digital data storage device teachings of Tringali in the digital data storage device of Hashimoto, in order to take advantage of substantially reduced cost-per bit (Tringali, col. 1, lines 44 – 53).

15. Claims 15 and 16are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto in view of Levy (US Patent No. 5,438,549).

Hashimoto discloses all of the limitations of the independent parent claims as discussed above. Hashimoto's data storage device derives primary operating power from the camera. However, Hashimoto does not specifically disclose that the predetermined event comprises disconnection of power supply from the camera to the data storage device. On the other hand, Levy discloses a memory storage (figure 2) device that transfers data from the temporary data storage circuit (23) to the permanent data storage circuit (21) upon occurrence of disconnection of power supply (col.2, lines 18 – 22).

Levy's device includes a short term power supply circuit adapted to supply power to the data storage system sufficient to transfer the data contents of the temporary data storage circuit to the permanent data storage circuit (figure 3, 30).

It would have been obvious to one of ordinary skill in the art, having the teachings of Hashimoto and Levy before him at the time the invention was made, to use the flash memory with battery backup teachings of Levy in the flash memory card of Hashimoto, in order to maintain data integrity of a memory device during loss of power (Levy, col. 2, lines 9 – 12).

16. Claims 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsukamoto *et al.* (US Patent Application Publication No. 2002/0048033, hereinafter "Tsukamoto") in view of Sarkozy *et al.* (US Patent No. 5,893,919, hereinafter "Sarkozy").

17. With respect to claim 4, Tsukamoto discloses a data storage system (figure 30) for a portable data generating appliance (figure 1) comprising:

a temporary data storage circuit (figure 30, 703) coupled, in use, to receive data from the appliance;

a permanent data storage circuit (701) coupled, in use, to receive data from the temporary data storage circuit; and

a control circuit (702) coupled to the temporary data storage circuit and the permanent data storage circuit, the control circuit being adapted to effect transfer of data from the temporary data storage circuit to the permanent data storage circuit,

wherein the data storage system is contained in an interface card (see figure 30) that is separable from the data generating appliance and, in use, is received by the data generating appliance to provide coupling for data transfer from the data generating appliance to said temporary data storage circuit.

However, Tsukamoto does not specifically disclose the capacity of the temporary storage circuit. On the other hand, Sarkozy discloses that cache memory (temporary storage), for disk drives (permanent storage) can have a storage capacity sufficient to store data comprising at least one picture from the appliance (col. 9, lines 33 – 34).

It would have been obvious to one of ordinary skill in the art, having the teachings of Tsukamoto and Sarkozy before him at the time the invention was made, to recognize that cache size in the order of tens of Megabytes is desirable since it allows for multiple requests to be serviced at one time (Sarkozy, col. 9, lines 52 – 54).

18. With respect to claim 6, the permanent data storage circuit comprises a non-volatile memory module that is replaceable in the interface card to allow a plurality of different memory modules to be used in a single data storage system (figure 30, the hard disk 701 in the interface card, it is replaceable since the entire card is detachable, thus replaceable, it is also replaceable from within the interface card since the card is manufactured by assembling different components together into a single card and the hard disk is one of the component that can be replaced with any other hard disk of same kind while being assembled or repaired, a plurality of different disks are allowed to be used in a single card).

Response to Arguments

19. Applicant's arguments filed January 24, 2005 have been fully considered but they are not persuasive.

20. Applicant's first argument with respect to claim 1, that data received by FIFO circuit 13 stays with the camera appliance is irrelevant as the claim does not require that the FIFO be outside the appliance. Data received from within the appliance is still data received from the appliance.

Regarding Applicant's assertion that Hashimoto's memory card is not "a permanent data storage circuit" because it is rewritable, the Examiner suggests that Applicant consult a dictionary such as the fifth edition of the Computer Dictionary published by MICROSOFT, before repeating such an assertion.

As to Applicant's third argument in reference to claim 1, the alleged absence of teachings of "other control circuits that control I/O operation of the FIFO circuit 13" in Hashimoto does not overcome the anticipating nature of Hashimoto's disclosure since element 14 identified in the rejection is sufficient by itself to anticipate the limitation in question. Additionally, the "other circuits" are inherent in the disclosure even if they are not specifically shown.

21. Applicant's arguments regarding claims 4 and 6 are moot in view of the new ground of rejection.

22. Applicant's arguments regarding the limitation "predetermined event" and the Parulski reference fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references. The Examiner notes that Applicant

chose not to present proper arguments for the second time. The Examiner's positions can be found in the Response to Argument section of the last office action (Final Rejection mailed October 19, 2004) and will not be repeated here.

23. As to Applicant's argument regarding claim 10 and Tringali reference, contrary to Applicant's allegation, this is a rejection based on obviousness, not anticipation.

24. With respect to Applicant's argument regarding the combination of Hashimoto and Levy reference, Applicant should read the rejection of claim 11 more carefully. FIFO 13 and the I/F circuit 14 are cited as alternate anticipating elements.

Conclusion

25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Woo H. Choi whose telephone number is (571) 272-4179. The examiner can normally be reached on M-F, 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matt Kim can be reached on (571) 272-4182. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

whc
whc
February 7, 2005

MATTHEW KIM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100